DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-014385

Address: 333 Burma Road **Date Inspected:** 24-May-2010

City: Oakland, CA 94607

OSM Arrival Time: 1000 **Project Name:** SAS Superstructure Prime Contractor: American Bridge/Fluor Enterprises, a JV **OSM Departure Time:** 1830 Contractor: American Bridge/Fluor Enterprises, a JV **Location:** Job Site

Jesse Cayabyab and Bernie Docen@WI Present: **CWI Name:** Yes No

Inspected CWI report: Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A Yes N/A **Qualified Welders:** No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:**

Delayed / Cancelled: Yes No N/A

34-0006 **Bridge No: Component:** Orthotropic Box Girder

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

At OBG L2W/L3W side plate 'C1' (0mm to 1200mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 continue perform CJP groove (splice) welding root then fill pass. The welder was observed perform automatic welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042A-1. The joint being welded has a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 200 degree Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. During welding, ABF Quality Control (QC) Bernie Docena was noted monitoring the welding parameters of the welder. The welder has completed welding the area he was welding and has moved to area 7900mm to 10555mm of the same plate. The welder welded the root pass and put few more fill passes before the end of the shift.

At OBG L1W/L2W near bottom plate 'D' inside, QA randomly observed ABF welder Chun Fai Tsui continue grinding the access hole at the bottom of various longitudinal stiffener splice butt joint. After the completion of grinding, the welder was also noted welding low spots/underfill on the weld cover reinforcement of splice butt joint of bottom plate 'D'. The welder was welding at 1G position using Shielded Metal Arc Welding with 1/8" diameter E7018H4R electrode. QA noted ABF QC Jesse Cayabyab monitoring the grinding of the access hole so with the welding of the bottom plate.

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While ABF were on break, this QA performed Magnetic Particle Testing (MT) on the longitudinal stiffeners S15 and S16 that were completely ground and MT tested/accepted by ABF QC. QA was using the Parker Contour Probe electromagnetic yoke with corresponding red magnetic powder as detecting media. There was no significant indication noted during the test.

At OBG L3E/L4E side plate 'C' outside, ABF welders Rory Hogan and Jeremy Dolman were noted excavating the Ultrasonic Testing (UT) detected defect/repair number 3 at location 210mm from the edge of plate 'B'. The welder was using a disc grinder to excavate then he switched to a die grinder with a barrel bit. While grinding, ABF QC Steven Mc Connell was also noted performing MT on the excavation until the indication was removed. QA also performed the MT and confirmed the total removal of the linear indication. Welding repair of this defect was not carried out this time pending submittal of third time repair request by the contractor.









Summary of Conversations:

As stated above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

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Inspected By: Lizardo, Joselito Quality Assurance Inspector **Reviewed By:** Levell,Bill QA Reviewer